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The Child Guidance Clinic

For Vocational and Educational Guidance and the Prevention of Mental Disease and Juvenile Delinquency

By G. S. Mundie, M.D. and Baruch Silverman, M.D., *Montreal*

THE evolution of mental medicine has been more rapid within the past two decades than it was in the previous two centuries. This was made possible by the patient labour and keen insight of a few physicians, who, departing from the orthodox medical methods, attempted to interpret mental symptoms as expressions of exaggerated and perverted instinctive and emotional demands, rather than correlate these symptoms with, and base them upon, changes in cerebral structure. To the average physician this manner of interpreting a pathological symptom is entirely novel and with difficulty understood. The reasons are obvious. Until very recently the majority of medical students entered upon their courses of study with little or no knowledge of psychology. During their undergraduate years they received a training which was confined exclusively to understanding the relation between bodily function and bodily structure. Time and again they were urged to visualize the structural changes which underlie the pathological function. But the psychology and pathology of mind has been to them an obscure domain. That mental causes may produce abnormal function has, therefore, remained to them a lasting enigma. The effect of this fault in medical education has been that a great many physicians are treating organs rather than patients, and bodies rather than individuals. This state of affairs is being appreciated by some of our medical colleges, and it is indeed gratifying to note that full courses in psychology, psycho-pathology, interpretive psychiatry and mental hygiene are now being incorporated into the regular medical curricula.

As a result of this new approach to the study of the individual, the field of preventive medicine has widened its scope to include mental hygiene as part of its programme. The immediate value of this latter inclusion has made itself manifest in the increasing attention that is being

paid to the treatment of the insane, the feeble-minded and other mentally afflicted individuals. But the real and lasting benefits that society will derive from mental hygiene endeavours will come from the study and guidance of both normal and abnormal children. Internists have for many years realized the importance of diagnosing and treating disease entities in their incipient stages. That this same stress must be laid on diagnosis and treatment of incipient forms of mental disease is therefore obvious to those who have a rational approach to the study and treatment of human ailments. In the histories of patients who have developed some form of psychiatric condition we are profoundly impressed by the fact that the foundation of their disease was apparently laid in childhood, during which period they were subject to numerous maladjustments. Many of the habits, the fears, the tempers, the night terrors and other mental instabilities, which play such an important role in conditioning the adult personality type, seem to bear a definite genetic relationship to the psychoses of adolescence and later life. From these and other observations that have been made in recent years, it has become clear that the causes of the functional psychoses must be looked for in the habit formations and idiosyncracies of childhood.

Nor is the prevention and treatment of mental disease the only benefit that mental hygiene has to offer to society at large, but it is in the vast field of sociological work that the practical and economic value of the study and guidance of children may be seen. Criminality, delinquency, immorality and various forms of psychopathy, which comprise the majority of our great social evils, are being looked upon in modern times as manifestations of asocial behaviour, which have resulted not from an inherited constitutional defect which is not amenable to treatment, but rather from faulty habit formations and undesirable personality traits that have been engrafted upon the unfortunate individual by the environment in which his early years were spent. The studies in adult and juvenile delinquency are bringing to light numerous facts which prove quite conclusively that the later asocial behaviour is the effect of early mental maladjustments. Whenever these early manifestations have been understood, and the child was placed in an environment and given an education in which these things have been properly recognized, the outcome has been very different.

This problem of giving scientific study and treatment to the conduct and other mental disorders of children has for several years faced the Mental Hygiene Committee of Montreal. The Committee, an outgrowth of the Canadian National Committee for Mental Hygiene, carried on most of its clinical work at the Psychiatric Clinic in the Out-patient Depart-

ment of the Royal Victoria Hospital, where treatment was afforded to all forms of mental disease. This Clinic was established in 1919 and is held every Wednesday afternoon. However, since there were being treated on this same afternoon children who displayed mild conduct disorders or were backward in school, with adult psychoneurotic and psychotic patients, it was evident that such a procedure was not conducive to the well-being of all the patients concerned. Furthermore, time and again children refused to come to the hospital; they said they were not sick and saw no reason for going there, and if persuaded to come, by the time they had passed through the various halls and reached the examining room, they were usually too intimidated and anxious to co-operate with the physician in a thorough psychological and psychiatric examination. For these reasons it was deemed advisable to establish a new clinic to be held in the offices of the Mental Hygiene Committee and to devote itself entirely to the study and guidance of children. This clinic was definitely opened in the early part of March, 1923, under the name of The Child Guidance Clinic.

One year's operation of this clinic has already shown its definite usefulness to the community. Not only has the attendance increased to such an extent that the present staff is not large enough to cope with it, but besides having children sent by the schools, probation officers and social agencies, parents themselves are bringing their children for advice.

The regular clinic periods are held on two mornings a week, but the office is kept open every day for the further study of cases that require special attention. The staff consists of a medical director, a psychiatrist, a clinic supervisor and an office secretary.

Inasmuch as this type of work was new, it was decided to allow the public as much facilities as we could afford them for studying our methods and results, and seeing the clinic in operation. Furthermore, we felt it inadvisable to refuse cases even at times when the staff was very much overtaxed with the work. As a result we have been unable to study all the cases intensively, but most of the children that presented major conduct disorders, delinquent tendencies and other serious maladjustments were thoroughly studied. The clinic has not limited itself to particular types of children. Its purpose is to study, help and advise in the case of any problem children referred to it, whatever the problem may be. It offers its services to the child with superior abilities, whose parents wish guidance in maintaining his mental health and mapping out a programme for his best development, to the school child who manifests definite conduct disorders or educational maladjustment, to those pre-school children who have begun to develop habits that later may become injurious to

their mental health, to the child who has developed a mental conflict that may result in a nervous breakdown, to the ward of a child-placing agency that wishes to place the child in a foster home, and to those children whose delinquency has brought them to the juvenile court. Whatever the problem may be the Child Guidance Clinic endeavours to be of service to the child and to those responsible for his welfare.

When a case first presents itself for examination, an attempt is made to obtain as much information as is possible of the previous history and behaviour of the child, from the agency or guardian that has referred the case, without having them make any special investigation. Parents are urged to come to the clinic to afford the examiner a better understanding of the home background and to furnish the necessary details concerning the hereditary influence and early developmental history of the patient. Reports from the principal and teachers of the school which the child is attending are obtained to acquaint the physician with the educational progress and general attitude and behaviour of the child in the school. Whenever this information is not obtainable at the initial visit of the case to the clinic, an investigation is made by a psychiatric social worker specially trained for this work, who attempts to obtain a complete record of the child's environment, the stock from which he springs and the child's own development career. Of special significance in this report is the information pertaining to the personality and mental attitude of the individuals who come in contact with the child and of the intellectual, moral, religious and social atmosphere that surrounds him.

With these data at hand the child is then given a physical examination in which special attention is paid to the heart, lungs, abdomen, nervous system, nose, throat, ears and teeth, as well as the ductless glands. Whenever necessary, additional special examination and laboratory tests are made in the various hospitals of the city.

A psychological examination is then made in order to determine the mental development of the child as compared with other children of the same age, to measure his educational progress and to discover special abilities and disabilities. This is done by applying the standardized tests, such as Stanford Revision of the Binet-Simon Intelligence Tests, Porteus Maze Tests, Healy Pictorial Completion Test II, Healy Construction Puzzles, etc.

In the psychiatric examination which is then given an attempt is made to see how the mind of the child works. A great deal of tact and judgment has to be used in order to put the child at ease and obtain his full co-operation. Obviously the same method of examining adult psychiatric cases cannot be applied to children, but with some changes in

procedure one is able to comprehend the mechanism at work and to detect the psychoses of adolescence and childhood. Of particular importance is a thorough discussion with the child of his inner mental life, his own view of his personal experiences, his own attitude towards himself, his associates, relatives and teachers, and his own account of his behaviour and motives for such.

When this examination is completed a conference of the medical director, psychiatrist and psychiatric social worker is held, and after a thorough discussion of the case, recommendations and treatment are specifically outlined for each individual case. This resolves itself into sending to hospital out-patient clinics those cases that require medical treatment, advising parents, teachers and agencies as to what sort of educational facilities will most benefit the child, in recommending and altering the social atmosphere and environment when this factor has had a deleterious effect, and in prolonged psychiatric study and attention to those children whose difficulties and problems are not easily understood. The general facilities for the guidance and treatment of children that are available in Montreal are, however, so limited that the onus of carrying on work that should really be done by institutions, schools and agencies for that purpose, is thrown upon our clinic. In order to understand the situation it must be remembered that in this city there is no compulsory education; the school boards are legally only compelled to educate children of "sound mind"; there are no special classes in the schools for the mentally deficient, retarded or neurotic children; there are no visiting teachers or attendance officers attached to the schools; there are no institutions for the feeble-minded in the Province of Quebec, and neither the City nor the Province appreciate as yet the full value of a scientifically conducted juvenile court.

Yet despite these disadvantages, the results obtained after a year's operation have been most encouraging and the clinic has proved of distinct value to the community. Increasing numbers of children are being referred to us by teachers and principals of schools, social agencies, the Juvenile Court, and parents themselves. The principals of schools have been particularly enthusiastic over the results obtained by the clinic. Boys and girls who have been exceedingly troublesome or backward in school and were on the verge of being expelled have responded to our method of treatment. The value of this may be seen when it is known that in this city if a boy proves too troublesome in school, he is expelled without any serious attempt being made to inquire into the underlying causes of his misbehaviour. The expulsion is often the first step towards first a delinquent and then a criminal career. A number of children who

would formerly have been sent to industrial schools and other correctional institutions have made excellent adjustments and have shown no further signs of delinquency.

The statistics that follow are taken from the records of the children who were brought to the Clinic between March 1st, 1923, and January 1st, 1924, and also of those children that were seen in the two months preceding the definite organization of the clinic.

During this period of twelve months there were referred to us 370 children, of whom 238 were boys and 132 were girls. The children varied in age from three to twenty years. Of these 237, or 64%, were Protestants, 103, or 28%, were Hebrew, and about 30, or 8%, were Roman Catholics.

The nationalities of these children and their parents were interesting from the standpoint of their wide distribution. Of the native born children, 103 were of Canadian parentage, 82 of parents who were born in the British Isles, 81 of Jewish families whose parents came from Russia, Austria, Roumania and Poland. In 4 the parents were American, in 6 French, in 2 Lithuanian. Of those children not born in Canada, 32 came from England, 21 from Scotland and 14 from Ireland. Twenty-two Jewish children were foreign born—15 in Russia, 4 in Roumania and 3 in Austria. One child was born in China, one in Denmark and one in Cuba.

Nearly half of the children (153) were brought to the clinic by the social agencies of the city. About one-fifth (75) were sent by the schools and various institutions for children. Fifty-one were referred by the Probation Officers of the Juvenile Court. Forty-five came from physicians and hospitals, twenty from the Women's Directory (dealing with the problem of the unmarried mother), and twenty-six were brought by parents, relatives and other private individuals.

The mental difficulties and social maladjustments presented by the cases naturally covered a large field. Among the symptoms for which the children were brought to the clinic, the most frequent were persistent stealing (ranging from simple thefts in the home to the stealing of automobile accessories, bicycles, etc.), lying, bed-wetting, sex delinquency and speech defect. Fifteen of our children were unmarried mothers and three were drug addicts. A frequent complaint (in about 50 cases) was "nervousness", which on investigation usually was found to consist of one of the above symptoms and, in addition, truancy, flights from the home, lasting from a few hours to several days, and staying out late at night. Fifty-four children were brought for being incorrigible; they were unmanageable, having uncontrollable, violent rage, and manifesting exceptional aggressiveness and cruelty to children and animals.

Several children were charged with setting fire to a number of houses with consequent serious financial loss. Fifty-eight were suspected of feeblemindedness, 61 were retarded in school and making poor educational progress and 20 came to ask for vocational guidance.

That the environment in which the child lived had determined to a large extent his present behaviour was quite evident from the investigations made of the home surroundings. In most of the cases visited there were difficulties and bad conditions in the home. Aside from overcrowding, inadequate and unhealthy sleeping accommodations and an improper objective regime, there was a lack of care and understanding on the part of the parents, and an intolerance shown to the children, who later became incorrigible. This is not only the result of ignorance, but frequently of selfishness manifested by the adults in the house, who have no feeling of responsibility and show an utter disregard for the child and his needs.

In reviewing the developmental history of these children, one is impressed by the fact that a number of them were rather slow in developing, as manifested by the late age at which they commenced to teeth, walk and talk. A large number, approximately 30% of the children suffered from severe illness and chronic ill-health during infancy and childhood, were troubled with enuresis for some time, and showed difficulty in learning to speak correctly. A large majority had found difficulty in acquiring the usual school knowledge and had been retarded throughout their school course.

Physical examination revealed very few cases in which active pathological processes were at work. Several showed signs of tuberculosis, kidney and heart disease. Approximately 40% of the cases were generally below par, with defective vision, defective hearing, nasal obstruction, diseased tonsils, bad teeth and malnutrition.

The psychological and psychiatric study of the cases brought out a number of mental conditions. Seventeen per cent of the 370 children examined were mentally deficient, 14% were of borderline mental defect and 18% were of subnormal intelligence. Seven children were imbeciles and 5 were idiots. Three cases presented a definite schizophrenic reaction and were classified as dementia praecox, one being called dementia praecocissimo on account of his youthful age; one case suffered from a manic depressive psychosis. Approximately 30% of the children were of normal intelligence, but presented severe mental conflicts, undeveloped and diminished ethical sense and lack of feeling of responsibility. About 60% of the cases were handicapped by mild or severe speech defects, such as lisping and stuttering. Six children suffered from epilepsy and four had chorea.

A few extracts from the case histories of some of the children will illustrate the types of problems one has to face in a clinic of this sort:

A boy of eleven years was brought to the clinic by his parents with the complaints of "nervousness" and "incorrigibility". For a year's time he had been very difficult to understand; from a bright and alert chap he seemed to have become dull, disinterested and backward in his school, annoying the other children and preventing them from working. In his family history it was noted that a paternal aunt was insane. The boy had passed through an uneventful infancy and childhood and had been able to learn things very rapidly. He was not a very active child, but always a leader in his little group of chums and easily led his school class. During the past year he became sullen, at times dull, seemed to have lost all the desire for approbation that he had manifested before, preferred playing alone and became easily angered. The mother said that at times she noted a peculiar stare in his eyes, he occasionally laughed rather foolishly, and that he had become careless of his personal appearance. It was very difficult to obtain his co-operation for examination purposes. He seemed abstracted, indifferent and uninterested in what was going on. There was no evidence of mannerisms, but his emotional reaction was rather odd and decidedly inappropriate. On close questioning the boy admitted auditory hallucinations, but it was impossible to get him to elaborate on these. From these findings it was felt that we were probably dealing with a schizophrenic reaction. We made a provisional diagnosis of dementia praecocissimo on account of his youthful age. This diagnosis was later confirmed by the Superintendent of the Protestant Hospital for the Insane, who examined the boy for admission into the Hospital, and by the general evidences of deterioration that had commenced to set in.

It can readily be surmised what effect a child like this can have on the other children in school and it is obviously useless and well nigh impossible to keep such a boy in school. Yet he attended classes and was a source of difficulty for everyone concerned.

A Jewish boy, ten years of age, was sent to us because he lacked self-confidence and was backward in school, always about the foot of his class. He was cranky, disagreeable, difficult to manage, cried a great deal and was capricious as to food (disliked cereal and eggs, would not take milk or soup and would only eat fried meat). A home investigation revealed that the mother, although seemingly sympathetic, had no understanding of the child's needs, and was really unwittingly fostering the boy's difficulties. A sister, one year older, was made by the mother to act as supervisor of the boy. He was not allowed out of her sight and had to do his lessons, etc., under her care. On examination it was

found that the boy was decidedly malnourished, anaemic and was quite myopic. His intelligence was quite normal and there was no evidence of mental disease. His own story revealed how embittered he was against the whole household. He resented so much the fact that he was not trusted at home and that he had to live under the supervision of a girl, that he said to the examiner, in the presence of his mother: "They don't think I can do anything; my mother doesn't love me as she does the other children; well, when I grow up and she gets old, I shall kick her out of the house". Another difficulty in this case was that, besides attending the regular school, he had to go to Hebrew School for two and a half hours every day, and he said that on account of that he never had any time to play, or, as he expressed it, "to get any air". With some persuasion the mother was made to correct her attitude towards the child, his Hebrew schooling was stopped for a while, his defective vision was attended to and after two months his studies had so improved that he approached very near the top of the class. He was improving physically and not giving way to those crying spells. This improvement was noted for three months, when he suddenly reverted to his old symptoms, and investigation this time showed the reason for this relapse. A younger brother was about to commence school, and the mother, who still had little confidence in the boy, asked a neighbour's boy to take care of her younger one to and from school. Our patient, who had volunteered to do this and was refused, resented it very much, saying that he could take care of his little brother better than anybody else. The mother had again to be persuaded to alter her methods, and since then he has made good progress. This case could be used for extended commentary, but we will only note that time and again the treatment of a child's problem really means the treatment of the mother, or rather of the situation.

One of the most difficult problems that we have had to cope with is that of speech defect. Ever so many children who are brought to us are mild or severe stutterers. A little boy of seven years, rather undersized, was nervous, irritable, suffering from enuresis and commencing to hesitate and stutter. He had learned to speak clearly at the usual age and had only begun to manifest his present symptoms during the past six months. The father of this family was a very domineering type. He had the children, including the mother, so intimidated that whenever he was at home the house had to be kept perfectly quiet. This child in particular was never given an opportunity of doing anything; he was distrusted and disliked by the father; whenever he wanted to say or do anything, he was told to shut up, keep quiet, etc. As a result, the boy was very much embarrassed and was becoming a stutterer. The mother was advised as to the real cause of the trouble and was asked to bring

the boy back again for further study, but the family apparently moved out of the district and we have lost track of this case. It must be emphasized that one should search very diligently for functional factors in these cases and attempt to remedy them. Most of the children who have the more serious speech defects are truly social outcasts. Not only have they great difficulty in communicating with others, but sometimes the cause, and very frequently the result of stuttering, is a very deep sense and feeling of inferiority, which these patients develop and which produces more suffering and greater inability to handle successfully the situations that present themselves to them.

A girl, fifteen years old, was referred to us by a social agency because she had disappeared from home, and, after staying away for nine days, was found working on a farm several miles away from the city. She was also said to be untruthful, stubborn, moody and light-fingered. The girl had lived at home with her mother and her stepfather, who was said by the mother to be impatient, quarrelsome and unsympathetic to the girl. He had insisted that she should be placed in domestic service, but the girl refused to do so. She was, however, ultimately persuaded to take a position as waitress in the Montreal General Hospital, where she was employed for about three weeks, when she ran away masqueraded in boy's clothes and secured employment from a farmer, whom she told that her parents had died in England. Examination showed that the girl was in good physical condition, of normal mentality and that she presented no evidences of mental disease. She described her escapade minutely; said that she had been reading a lot of boys' books and would often think how wonderful it would be to be a boy. Being dissatisfied with her position and fearing the consequences of returning home, she determined to dress up as a boy and run away. She was quite repentant, realized the foolishness of her action and was quite willing to go back home and to help by doing general work in the house. However, after a short while she again got into difficulties, this time with her stepsister, who was acting as guardian while her mother was away. As a result of this, she stole some money and ran away once more. She was soon located, but her parents would not take her back home; they insisted that she be sent to a correctional institution. This was an unfortunate result, but the parents insisted that she be sent there and we could not influence them to employ other measures. One feels that in such a case, in spite of the faulty personality make-up and the unusual method of reaction, if a Big Sister could have been obtained for her and employment found where she could also have gone to night school for a business course, this girl might have made a good adjustment.

In conclusion, we would like to summarize a few facts that have impressed us in doing this work.

(a) The Child Guidance Clinic has demonstrated not only the need for such a clinic, but also of what direct value it is to the community, for not only does it aid in educational and vocational guidance and help the prevention of certain forms of mental disease, but it becomes of very obvious economic value in its endeavours to prevent delinquency and crime.

(b) The very necessary assistance which this clinic offers to the social agencies of the city by providing them with an accurate conception of the type of case with which they are dealing and therefore being of great value to these agencies from the standpoint of economy and the conservation of the time of their staff.

(c) That institutions for the feebleminded are an absolute necessity. Such institutions would gradually assume responsibility for the large number of mental defectives that, under the present circumstances, even if detected by ours and other clinics, are left to their own resources. It is our contention that such a procedure would alleviate this big social evil of vice with which we have to contend so much.

(d) There should be adequate educational facilities not only for the normal child, but special classes for the backward, retarded and neurotic children. A form of special correctional training should also be offered to those children who have developed mild and severe speech defects.

(e) Inasmuch as a Child Guidance Clinic is essentially for the handling of problems of individuals from six to twenty years of age, the need is felt for the establishment of pre-school clinics in the various settlement districts of the city for the study and treatment of children from two to six years of age.

(f) Without seeming too optimistic, one is inclined to feel in such an age as curs, when men are working so diligently for a solution of our great social evils (vice, crime, wars, religious, racial and national intolerance, and vast economic difficulties) and are proving so unsuccessful, that perhaps the fault lies, not so much in the methods, as in the direction to which they are being employed. To alter the opinions, habits, customs and personalities of people who have attained a mature age, is well-nigh an impossibility. Is it not clear then that our energies must be directed to the child where such efforts are readily rewarded? We feel, therefore, that the chief work of preventive mental medicine must be to educate the public to a full realization of the value of properly educating, training and guiding children, and not until that has been accomplished will mental hygiene have redeemed its pledge of service to mankind.

May, 1924.

A Clinic for Women and Children

By Dr. Gerald H. Pearson

Executive Secretary, Ottawa Social Hygiene Council

IN no other place is the pathos of the ravages that syphilis produces in a community so forcibly brought to one's notice as in a clinic for syphilitic women and children. The male clients at a syphilitic clinic may produce in the unthinking onlooker a feeling of disgust and be dismissed by a gesture of "served you right", and the diseased prostitute may only provoke the age-old pharisaical contempt, though there is much to be said in their defence, particularly in the case of the latter. But no one can look upon the diseased deformities of little children, or the women whose right to motherhood has been blighted by the long toll of miscarriages and syphilitic children, which the disease levies in so consistent a manner, without realizing the tragedy of this infection that haunts so many homes, and the danger that threatens the happiness and even the existence of the race. These are the innocent victims of an insidious, infectious disease, introduced into their economy either before birth or during the normal processes of a natural life, and to them most of all syphilis is not a venereal disease, any more than either cancer or tuberculosis would be. Even one visit to a clinic should impress on the most bigoted layman a realization of the necessity of strenuous endeavours to curtail its activities. Moral questions do not enter into the consideration here at all, for it is my experience that the percentage of syphilized mothers and children is higher among the legitimately married than among the unmarried mothers and their babies.

The work of a syphilitic clinic for women and children is primarily therapeutic, i.e., the treatment of the already diseased persons, and many problems in regard to diagnosis and treatment occur that are of the greatest interest medically, yet a recital of some of these phases would be without value to a non-medical audience. However, a consideration of some of the social phases that arise reveals many channels through which Social Hygience Councils can be of invaluable assistance in the scientific attack of this disease.

Let me cite a case that will illustrate more forcibly than any generalizations the first and most important of these. A woman of 35 brought

Read at Annual Meeting, Canadian Social Hygiene Council, December, 1923.

her only child, a boy of 12 years of age to the clinic for examination. She had been married for 15 years and up till her marriage had been perfectly well. She had been pregnant six times. The first three pregnancies resulted in miscarriages, the next two resulted in the full term living children, who died within the first year of life. The last pregnancy was the boy in question. He was markedly defective mentally, having a mental age of only six years. Physically, he was puny, and a weakling. She herself looked ten years older than her actual age, and was complaining of ill health, which was gradually becoming worse. In this case the syphilitic infection had cost the country 5 useful lives, the expense of maintaining one mental defective, for I question if, at the best, treatment will avail much in increasing this boy's mentality past that of a child of 10, and a probable shortening of the life of both parents. Does not such a case impress the importance of a premarital medical examination. Had that man been examined before his marriage, and thoroughly treated, to-day the country would be economically richer, to mention only the least of the results of such a condition of affairs. Ordinarily a man's financial status and his social standing determine his eligibility as a suitor for a girl's hand. Of how much greater importance is the status of his health. Legal measures enforcing such an examination have so far been inefficient and it is not felt that recourse should be had to the law at this time, for an efficient law merely incorporates public opinion and does not inaugurate it. Social Hygiene Councils everywhere should stress the importance of medical certificates as a preliminary to matrimony, and when public opinion is firmly convinced of the necessity of such a course, proper legal measures will follow in due time.

This case illustrates the necessity of educating the public in the importance of thorough early examination of a pregnant woman. In this, the prenatal clinics already existing should be encouraged to work in unison with the Social Hygiene Councils. It is becoming widely realized that a woman should consult her doctor as early in pregnancy as possible, and visit him frequently during the whole period that any untoward event occurring during the course may be treated before any serious harm arises and that her doctor may have an opportunity of determining whether there are any anatomical difficulties present that would militate against normal labour. Furthermore, there is hardly a woman that does not need careful instructions in the care of her first baby and such should be given during pregnancy. But of equal importance is the subjection of every pregnant woman in the early months of her pregnancy to a careful examination for syphilis, that spectre that lurks unseen in so many homes from the highest to the lowest. If a woman is found to have

syphilis she can be treated and so assured of a healthy non-syphilitic child and her pregnancy not result in either an abortion or the birth of a diseased baby with all the heartburnings and misery that this entails. Of equal importance is a routine examination of the child at birth and several months later, for should the disease not be discovered during pregnancy yet efficient treatment of the child if started early enough will arrest the process.

Widespread education along these lines will ensure to the next generation a greatly decreased number of marital and congenital infections and remove from the clinics of that time those pathetic instances of which so many are seen to-day.

But what of the women and children already infected? Unfortunately syphilis in women during the childbearing period, is often latent, i.e., it shows no other symptoms than the bearing of diseased children, and the woman though not feeling at the height of well-being, yet finds it difficult to realize that she has any serious disease. If she has children they may not show marked clinical evidence of the infection for several years and in the meantime the organism of syphilis is carrying on its destructive activities in her body and the body of her children. Here the work of the Social Service nurse attached to each of the Provincial Clinics is all important and I feel that they are worthy of the highest praise for the tactful and efficient manner in which they perform a very distasteful duty. The family of every married male syphilitic must be visited and brought to the women's clinic for examination. Fortunately, in a number of cases no infection is found and if the husband follows the instruction given by the clinic no harm will accrue to his family. Those who are already infected must be treated until an arrest of the disease is obtained and though a cure in the correct sense of the term cannot be assured, yet the wife can be so improved that her life will not be materially shortened, and future pregnancies will produce healthy children, and early death or further deformity of the diseased children may be prevented. Though the physical and mental and social scarring already present may still exist yet happiness and freedom from suffering may be brought to such a family and they may be enabled to take their places as useful members of society. At present this is a big work of a women's and children's clinic and for its proper functioning the efficient work of the social service nurse is of the utmost importance.

Our confreres, working in the field of mental deficiency have done work of marked benefit in inaugurating special classes and other psychiatric measures for the assistance of backward school children, but it is equally important that syphilis as an etiological factor should be ex-

cluded ere the case be relegated to that unfortunately large class of mental deficients whose sole hope lies in re-education. As soon as a child is found backward in its school work, a systematic and thorough survey of the child physically, mentally and environmentally should be made, particularly an expert examination performed for syphilis. Though the injury to the developing brain is frequently so great that specific treatment is disappointing yet some such cases show marvellous improvement. The Social Hygiene Council should co-operate with the clinics in impressing the importance of this on those engaged in the education of backward children. Furthermore, school nurses should receive intensive training in the recognition of the stigmata of congenital syphilis, and should be impressed with the fact that the clinic exists for diagnosis as well as treatment and that it is better that ten children, whom she may suspect of suffering from syphilis, should be examined and found negative, than that one syphilitic child should escape undiagnosed.

I have endeavoured, not to lay before you medical statistics or medical aspects of the disease, but to show whence the clientele for such a clinic for women and children is drawn and the necessity of utilizing these avenues to the utmost in attempting to control the disease. In conclusion I would like to reiterate the necessity of every local Social Hygiene Council devoting sufficient part of its educational work to the dissemination of knowledge of the importance of a premarital medical examination, frequent examinations of the pregnant mother, and of the new born child, the examination of backward and unhealthy children for syphilis and the desirability of utilizing the existing medical facilities for the diagnosis of obscure conditions such as repeated miscarriages. Such sane propaganda should be invaluable in freeing the next generation from syphilis, the disease that has invaded at least 8% of Canadian homes.

The Prevention and After Care of Acquired Heart Disease in Children

By H. P. Wright, M.D.
Montreal

(Read before the Section on Diseases of Children of the Canadian Medical Association in Ottawa, June, 1924.)

THE ordinary practitioner has a two-fold practical interest in heart disease and must ever ask himself two questions; first, what can I do to help the child suffering from heart disease; second, how can I prevent the child from developing heart disease?

That heart disease is a serious problem is easily realized by a consideration of the following figures:

Population of the United States in 1904	98,781,134
Deaths from tuberculosis	126,440
Deaths from organic heart disease	139,281

Again a recent report of the Department of Health of the City of New York, covering over 250,000 physical examinations made by school medical inspectors during the year, showed an incidence of cardiac disease in 1.6%. Very little reflection of these figures is required to convince one that a national interest in heart disease is of as much importance as in tuberculosis. Much has been done to awaken the public conscience in the United States about heart disease, but so far practically nothing in Canada, and when one reflects that the problem of prevention can be dealt with by the general practitioner, medical school inspectors, and other public health officials, the matter becomes of prime importance, and altogether dissociated from those problems which are often classified as of academic interest.

In mapping out a programme for the care of the cardiac child the first thought is prevention. This is a most fertile field, and herein lies our great difficulty at present. We all believe, and it has been demonstrated with fair certainty, that the portals of entry for rheumatism and other diseases which affect the heart are diseased throats and carious teeth. One must remember, however, that any tissue previously the seat of a rheumatic infection would seem to be a most obvious source of focus for re-infection. Statistics are lacking at present to accurately demonstrate that wholesale removal of the tonsils, and perfect care of the teeth would diminish the incidence of rheumatism, but it is impos-

sible to avoid the feeling that this would probably be the case. Unquestionably every child we suspect of definite disease of the heart should be carefully studied with a view to the correction of nutritional defects, bad teeth, diseased tonsils, etc. What child welfare work with periodical examinations will accomplish in the incidence of heart disease is difficult to say, and one would not like to definitely prophesy that when the general public takes as much interest in the health of their children as the farmer does in that of his cow, that acquired heart disease will be as rare as smallpox in a vaccinated area; nevertheless it is possible that such may be the case.

Diagnosis.

In the past, undue emphasis was laid on the refined pathological diagnosis of an acquired heart lesion, and determining the hypertrophy to the decimal point. The introduction of the stethoscope and its subsequent over-use in the hands of the inexperienced was often responsible for creating cases of heart disease. Recently the pendulum has been swinging to the other extreme, and the heart has been investigated from another point of view, *i.e., function;* in other words, as a muscular pump how much work can it do? The American Association of Cardiac Clinics in their last session adopted the following classification:

Class 1.—Patients with *organic* heart disease who are *able to carry on* their *habitual* physical activity.

Class 2.—Patients with *organic* heart disease who are *able to carry on diminished* physical activity.

A.—Slightly decreased.

B.—Greatly decreased.

Class 3.—Patients with *organic* heart disease who are *unable to carry on any* physical activity.

Class 4.—Patients with *possible* heart disease. Patients who have abnormal physical signs in the heart, but in whom the general picture, or the character of the physical signs leads us to believe that they do not originate from cardiac disease.

Class 5.—Patients with *potential* heart disease. Patients who do not have any suggestion of cardiac disease, but who are suffering from an infectious disease which may be accompanied by such disease, *e.g.,* rheumatic fever, tonsilitis, chorea, syphilis, etc.

There is much that commends itself in this classification, for it is simple and can be readily understood by all people, and in addition concerns itself only with the working capacity of the heart. With a classifi-

cation of this sort in operation the question of special classes naturally arises. In my opinion the group treatment of the heart disease is a distinct advantage, and should not create neurasthenics, but rather optimists, for who can say that the group treatment has not worked well in tuberculosis, and the problem in heart disease has many points in common with phthisis. Diabetics, nephritics, tuberculars, cardiacs, etc., it would almost seem as if the future of Medicine were bound up in segregation into groups and education of these groups.

The operation of a special clinic is simple; particularly simple in the case of children. A start may be made by any well-trained physician who is interested. A social service worker is a most important feature in the successful operation of the clinic, for it is she who is responsible for faithful attendance at clinics over a long period of time. All cases should report at the clinic at least every three months, and in many instances it is necessary to attend weekly. On the first appearance of a case a detailed history should be procured, and the case placed in one of the groups. At subsequent visits the assistant should do the following to the patient:

1.—Weight.

2.—Vital capacity before and after exercise.

3.—Pulse rate before and after exercise.

Then the case should come before the physician for examination and particular care should be taken to always examine the mouth and throat as well as the heart.

Weight.—In my experience, in children a careful observation of weight is of extreme importance as we have found that one of the very earliest indications that a case is not doing well is slight loss of weight. Of course in adults a gain of weight in heart disease is not regarded as of particular importance, but invariably in children a gain in weight is of the greatest significance.

Vital Capacity.—By this term we mean the volume of air that can be expelled after the deepest possible inhalation. Francis Peabody is responsible for introducing the application of the spirometer in heart disease, and according to him it is of great help in measuring dyspnoea. We have found this test to be of some help, but are not yet prepared to say that it is necessary in an estimation of the functional capacity of the heart. However, it must be said that this test is considered by May G. Wilson, of New York, as one of the most refined in the early detection of oncoming failure.

Pulse Rate.—The determination of pulse rate before and after exercise is often of very great value. This test is, of course, so well-known to all that it does not require discussion. However, it may be

worth while to say that the old method of running up a certain number of stairs has now pretty well given place to dumb-bell exercise, and, in fact, Sir Thomas Lewis only estimates exercise tolerance by the employment of dumb-bells.

Finally, as in so many other diseases, probably the best function test of all is a careful history and an intimate knowledge of what the patient is able to do from day to day.

In conclusion then, Gentlemen, I wish to emphasize two things:

1. Preventive work: that is, prevention of infection.

2. Treatment: that is, treatment of infection and conservation of the reserve of the heart by regulated exercises, proper vocation, and an appreciation of the fact that the heart is a muscular pump.

I feel that the cardiac problem is not being vigorously attacked by the medical profession of Canada. An opportunity is beckoning to us and I place the matter before you for your consideration and support. At present, to my knowledge, there are not more than four special cardiac clinics in Canada; there should be at least fifty. Assuming that the population of Canada is 10,000,000, we must have at least 200,000 cases of heart disease to deal with. Again assuming that half these cases of heart disease occur in private practice, that would leave us 100,000 or 2,000 cases for each clinic.

Social Hygiene in Relation to Public Health

By Dr. D. V. Currey, M.O.H.
St. Catharines

(Read at the Annual Meeting of the Ontario Health Officers' Association, Toronto, May 21st, 1924.)

SOCIAL HYGIENE, a comparatively new term, really means the general health of the community, so on this account every Health Officer should be vitally interested in it. A healthy state of all conditions of living would result if Social Hygiene were actually practised; we would have a normal world, our death rate would be lowered, there would be little poverty, (because this very often is the result of preventable disease,) there would be proper supervised recreation for our growing up boys and girls and sex hygiene would be taught them.

To many people the term "Social Hygiene" means only sex education and this paper will only deal with this narrower view. The propagation of the species is one of the fundamental laws of nature, this instinct is implanted in all healthy, normal people, but on account of lack of control of many persons in each community it is often so distorted that vice is the result. This in itself would be bad enough, but with it comes the so-called social diseases, very contagious, that are passed on from one person to another. At the present time these diseases constitute one of the greatest Public Health problems in the world. Any M.O.H. who has tried to do any work along this line must realize how great is the task and how little, so far, has been accomplished.

Owing to the insidious way Venereal Diseases are spread it seems at the present time a very great work must be undertaken by every right-thinking person, every Board of Health and every Medical Officer in each community, unless the scheme is Dominion wide and we are able to make the people realize the seriousness of the problem, we are not going to get the results we hope to attain. If the Health Officer will not do his part, how can he expect the physicians and laymen to do theirs?

In ordinary epidemics spread by respectable contacts of civilized life, while we may have difficulty at times in tracing our contacts, ordinary hygienic measures usually suffice to combat the trouble, but as in the Venereal Disease problem the persons who spread the disease are social outcasts, when the machinery of control measures may be contrary to public opinion, is it little wonder that so far we have only touched the fringe of things?

The name these diseases bear is one of degrading association and on this account possibly, it has taken the general public, yes, and many of our Health Officers too, a long time to realize that we have been living in a fool's paradise. One authority has said, "No single factor in the fight for prevention is more important than the dispersal of ignorance and misinformation which shroud these diseases like a fog." Any of you who have done any active V. D. work must realize how true these words are.

The so-called Venereal Diseases are Chancroid, Gonorrhoea and Syphilis. Chancroid while conveyed by sexual intercourse, is essentially a disease of filth, it rarely causes serious trouble and simple cleanliness is its prevention. From a Public Health standpoint it need hardly be considered were it not for the fact that Syphilis is often overlooked because the physician is so sure that he is dealing with a "soft" sore. In the clinics where careful diagnosis is made it is found that Chancroid is a fairly uncommon disease. The dark-field is perhaps the only way one can early differentiate Chancroid from Syphilis, the Wasserman being at this time of very little help. Several examinations of the exudate may be necessary and also several blood tests; a month after the chancre has appeared, if the Wasserman and dark-field findings are still negative, one may reasonably assume that the disease is not Syphilis. There are some physicians who say that they can feel the difference between "hard" and "soft" sores, but in the light of modern medicine one sometimes wonders if they do not just make a fifty-fifty guess.

For many years Syphilis and Gonorrhoea were thought to be the same disease; even the illustrious John Hunter taught this, so it is not surprising that to-day many people still have this idea. Both these diseases are to a very great extent preventable, they are highly contagious, affect all classes of society and are far more common than most people imagine. The findings of the Royal Commission on Venereal Diseases are still fresh in our memory. Those of us who have looked over this report must have been surprised when we read "the number of persons who have been infected with Syphilis, acquired or congenital, cannot fall below 10% of the whole population in the larger cities and the percentage affected with Gonorrhoea must greatly exceed this proportion, perhaps by four or five times."

Gonorrhoea

Gonorrhoea is due to a specific organism, the gonococcus, discovered by Neisser in 1879. It is practically always acquired through sexual intercourse, though we must not forget that in children it may occur in-

directly. At first this disease is confined to the mucous membrane of the urethra or vagina, but it may spread deeper than this and invade other genito-urinary organs. If taken early after the onset proper treatment limits the infection, but untreated or partially treated cases go on to a chronic stage which is difficult to cure and even after a considerable period of quiescence the discharge may reappear after excesses of sexual intercourse or of alcohol. This disease is seldom fatal, but its results are very bad for the future generation, on account of its damaging action on the female genital tract it has been called "the sterilizer of the race." It is the cause of much of the blindness in the new born and is responsible for 50% of the operations on the female generative organs.

Syphilis

Syphilis was first noted in the fifteenth century; it has remained endemic ever since. The specific organism, the Spirochaeta pallida, was discovered in 1905 by Schaudinn and Hoffman; later Wasserman not only confirmed the work of the others, but gave us a bio-chemical blood test by which the presence of Syphilis may be proved and treatment regulated. This disease may attack any part of the body to which it is conveyed and, while at first implanted in the form of a local lesion the so-called "primary sore" of the skin or mucous membrane, it easily spreads by the blood stream itself. It may simulate many different diseases, on this account being at times very difficult to diagnose. Within a few weeks generalized symptoms appear upon the skin or mucous membranes, these are the secondary lesions. Following this stage months or years may pass without any further evidence of disease, or the tertiary stage with the deep-seated lesions of skin, muscles, bones or viscera may commence. Long after the original disease has been forgotten we may get the cerebro-spinal complications, locomotor ataxia and general paresis.

Syphilis has been called the "killer of the race." We know it to be the cause of many apoplectic and paralytic strokes in early life; to it is also due a large proportion of the diseases of the heart and blood vessels. It is usually spread by irregular sexual intercourse, but a small number acquire this disease innocently, and congenital Syphilis is found in children born of parents who have this disease. If treated early, especially before the Wasserman test becomes positive, the results are excellent, but the later stages do not respond very readily to treatment. Here again the untreated or the partly treated case may keep spreading infection.

These Venereal Diseases affect practically all prostitutes. It is almost inconceivable how any can escape either or both of these infections. They are both difficult to treat properly and the problem of cure is going

to be a very big one until everyone realizes that both Gonorrhoea and Syphilis are serious diseases, that each case must be treated by a physician and the treatment continued until absolutely cured.

We have then a real Public Health menace. Unless the situation is faced squarely with each community doing its share our task is almost hopeless. Do not let people tell you that any municipality is free of these diseases, because we as physicians know that few of our patients are above suspicion. The M.O.H. in this as in all other public health work must be a leader; it is his duty to do everything in his power to enlighten the general public as to the prevalence and danger of Venereal Disease, to trace up known contacts and if anyone in his community leaves off treatment he must see to it that treatment be recontinued until cured. If anyone suffering from V. D. moves to another locality the M.O.H. of this place should be notified at once, as only by closest co-operation between Health Officers will we be able to get any kind of results.

One sometimes wonders just how many cases of Venereal Disease there are in Ontario. During 1923 the following were reported to the Provincial Board of Health: Syphilis 1,699, Gonorrhoea 1,992, Chancroid 43. We know, of course, that there were many more than that number of new cases treated. At the Toronto General Hospital routine blood examinations revealed the fact that in the free wards nearly 13% of all admissions gave a positive Wasserman and the Montreal General Hospital figures were about twice as great. If the general practitioner investigated his ordinary cases more thoroughly he would be surprised how many of his patients gave positive Wassermans.

All recognized text books agree that the complement fixation test for Gonorrhoea is of definite value, but there has been so little demand on the part of physicians for this test that the Provincial Board of Health has discontinued it. Unless the microscope is used on every urethral discharge many cases of Gonorrhoea are bound to be undetected.

In order to cut down the number of tragedies that occur among the married, it might help matters greatly if a careful medical examination were required, including Wasserman test and microscopic smear. A certificate could then be issued by the physician which would be produced when the marriage licence is applied for.

EDUCATION OF THE PUBLIC

Physicians

As the Venereal Diseases are greatly increased through ignorance, it would seem that education must be our first consideration, and in order

to reach the people we must start with the physician. Regulations of the Provincial Board of Health respecting Venereal Diseases make it compulsory for all cases of V. D. to be reported to the M.O.H., but I am confident that few of you are satisfied that the physicians carry out these instructions. Medical men most prompt in reporting other communicable diseases are very often lax in reporting their Venereal cases. The M.O.H. must make, according to the Regulations, a weekly report to the Provincial Board, but I find in very many instances this is not being done. If the Health Officer neglects to do his duty he cannot expect the physicians to do theirs, and if our whole profession are careless the general public cannot be expected to help us. The legislation for the control of these diseases has been passed, so it remains only for us to take advantage of it.

There are several films on Venereal Disease supplied free by the Provincial Board of Health. Each Medical Officer should make sure that his Medical Society has a chance to see them, as they not only cover diagnosis but also treatment. This, I think, is the best method of educating the physicians. The County Medical Society offers a place where the M.O.H. may talk over his difficulties with the physicians of his municipality and from the discussion may get some very valuable information about the "missed" cases which may be spreading infection in his locality. Until we get our physicians to report all their cases to us and to notify us of those who discontinue treatment, I am afraid our results in control are not going to be very good.

Parents

The general public are gradually realizing that many tragedies among the married, much suffering among innocent children and women and a great deal of inefficiency among the young people have in the past been caused by Venereal Disease. Many parents now realize that the spread of these diseases has been helped by false ideas of sex. Only a few years ago when sex matters were never discussed in the home, the child picked up his knowledge on the street, practically always getting a very distorted view. Children were supposed to have been kept in a blissful state of ignorance, but we know that other agencies were spreading misinformation among them, often with disastrous effects and the children were anything but ignorant. Sex hygiene, to be ideal, must be taught at home; no outsider, however gifted he may be, can possibly take the parents' place in this important subject, but if the parent feels incompetent the family physician or clergyman should be appealed to.

To protect the children sex education is essential. Any parent who

neglects this may be to blame for much of the trouble the child gets into later on in life and sex education should be started when the child asks the first question about it. All normal, healthy children have implanted by nature a curiosity about things, including birth and sex. This curiosity usually shows itself about the age of six when the question "Where did the baby come from?" is asked. The wise parent will then explain to the child that babies grow inside the body of the mother just as birds grow inside eggs in a nest, that the mother keeps the baby warm the same as the hen-bird does the eggs, and as in the case of the birds, when they are ready they come from the shell, so a baby when ready comes from the mother's body, or as we say, is born. This will usually satisfy the ordinary child and the parent has likely retained the child's confidence, so that from then on the child will go to the parent for advice on this subject. If the first question is evaded or an untruth told the child will look elsewhere for his information.

The young girl should be encouraged to go to her mother with all her problems, including those of sex. The wise mother will gradually tell the girl about the changes in her life just far enough in advance so that she has been prepared for such change; she will tell the daughter the story of life, warn her against allowing any liberties by the opposite sex; she will explain about Venereal Diseases and how they are spread. The girl must be taught that marriage to be truly happy must be one of love, not one of economic or social attainment.

The father should look after the boy, help him with his many problems, teach him sex hygiene, and to honour, respect and protect those of the gentler sex. The boy should be encouraged to take part in healthful, manly sports in order to learn self-control. As he grows older he should be told about Venereal Disease and that "sowing wild oats" usually means reaping these diseases.

So few parents inquire into the kind of companions their children have that it is no wonder to-day there are so many disasters among the young; not many realize that this is an age when "Try anything once" seems to be the slogan and this may be one of the causes of the spread of Venereal Disease.

The Municipality.

Housing conditions have a great deal to do with vice in any community. If several families are crowded together in a few, dirty, poorly ventilated, unsanitary rooms, is it any wonder that immorality occurs? The Medical Officer should be very energetic in making sure that the cheaper boarding houses especially are regularly inspected and kept in a proper condition. All boarding houses should have a proper reception

room where the girls may entertain their guests instead of in their bedrooms as is often the case now. The municipality must insist on proper by-laws for preventing bad housing conditions and should assist the M.O.H. in providing educational films on health subjects and personal hygiene for girls. In some cases it is difficult to convince the average councillor about housing conditions, especially if a prominent citizen happens to own the building.

Province of Ontario.

At the present time there are in operation in this Province only eighteen clinics for the free treatment of Venereal Disease, six of them being in the City of Toronto. These clinics are all supervised by the Division of Preventable Diseases of the Provincial Board of Health. They are supported by a Federal Grant which last year amounted to $57,473.68, the Province granting an equal amount. These clinics should be greatly increased in number, each County having at least one. In order to start a clinic $1,000 is granted for the equipment and $500 yearly towards the salary of the physician and the same amount towards that of the nurse. In my own municipality last year 972 treatments were given. There is no doubt that had the clinic not been established many of our cases would never have received any treatment. Unless all known cases are brought under supervision and all contacts examined, either by the private physician or at a clinic, we cannot hope to keep the number of these cases from increasing. It has been hinted that on account of economic reasons the Dominion Government would have to cut down considerably or perhaps discontinue their grant. If this is done it is difficult to see how the present clinics can be adequately financed and it is very unlikely that new clinics could be opened.

Canadian Social Hygiene Council.

The Canadian Social Hygiene Council, with its branches in different municipalities of the Dominion, has done an excellent work from an educational standpoint, and no other single agency, perhaps, can so help the Medical Officer. It is unfortunate, however, that so few Health Officers have taken any interest in this organization. With a County Social Hygiene Council to help him and a clinic within easy reach, the M.O.H. should not have much difficulty in handling his indigent cases of Venereal Disease in strict accordance with the Act.

The Church.

The problem of Social Hygiene is such that one would imagine the Church would be greatly interested in, but for the most part the clergy,

especially in our smaller centres, have very carefully avoided it. On this account, perhaps, many of our leading citizens will not take any interest in this subject, so that a great deal of educational work must be done before the Church assumes its responsibility. A talk on this subject to the Ministerial Association by the M.O.H. might help a great deal in this regard.

Summary.

To sum up then, from a Public Health viewpoint, if we are ever to approach Social Hygiene and attempt to control Venereal Disease, each Medical Officer of Health must start in his community to educate first the physicians and through them the thinking people. Every case of V. D. must be placed under treatment and kept there until cured or until non-infective. Sex hygiene must be taught the young people, preferably at home, so that the next generation may avoid the dangers of the present one, and none of these plans can succeed until each M.O.H. does his share of the work and co-operates with his fellow-workers in other municipalities.

The Waiting Shadow

By Sister Olafia Johannsdottir

Translated by Rev. C. V. Pilcher, D.D., Toronto

(Continued from September number)

CHAPTER VI.

Ruth felt that the other girls did not like her because she was so quiet and generally stayed in her own room. They very likely imagined that she thought she was better than they. But that was not the reason at all. It was that she could not bear their manners. Most of them were so capricious and violent. Sometimes they were jubilant, merry, laughing, singing and chatting; when a few moments before they had been in such a fury that everyone was frightened of them, while they poured forth a torrent of the most appalling abuse. And yet in spite of this they could be wonderfully kind. When their friends brought them something good, they always shared most of it. Many of them were kind to the children whom they looked after and seemed to be sorry when they were bad.

While the floor was being painted during the summer the beds were moved out into the corridor. At that time a girl came in called Andrina. She came from the maternity ward with her baby. The child had large sores below the nose and round the lips and on the chin. Ruth could never understand how Andrina could appear so happy and proud while she sat with it on her lap. She herself was terribly hoarse. Her flesh was disfigured and covered with scars. She told them that once when she was in the State Hospital she had escaped, and hidden herself for four days in the Bay District with a friend who lived there. But the police had got on her track and taken her up to Ullevaal. One evening in the twilight three of them together had escaped from there. They got into a little room by the side of the clothes cupboard and slipped from there out by the window. With their hands they caught hold of the eaves-trough under the roof and let themselves down by the rain-pipe. They climbed over the barbed-wire fence and hid among the trees till it was dark. They could hear the nurses looking for them just close to them. You could not deny that there was a God, because she had asked Him to help them, and they had Him to thank that they were not caught. So they ran through the whole town, all the way down to Valley Street, where Gertrude and Wilhelmina lived. Helga lost her shoes when they were climbing over the fence, and had to run in her socks. All three

were just in the white jackets and gray petticoats which were the uniform of the Fourth Wing. A student whom they passed asked if they were escaping from a fire; but they did not answer—only ran on as fast as they could. Two of them were caught the following day, but Helga escaped to Horten. Andrina was glad of that, because Helga was the sweetest thing and never tried to get others into her troubles.

Every now and then people came and sang and played on the piano. The patients liked that, but they were more pleased yet when someone brought them flowers. They had quite a different opinion of the visitors who came and looked at them disdainfully as though they imagined themselves far better and more virtuous, and despised the wretched victims, and were afraid of being defiled by their touch.

Ruth could never forget a meeting which was held in the corridor—she was so deeply affected by it. Andrina was never willing to sing—she said that she couldn't—she was too hoarse—but on this occasion she let herself be persuaded by one of the nurses who lent her her guitar. At first her voice was extremely hoarse, but she seemed to sing her hoarseness away. Before the end of her song her voice was strong and clear. Afterwards Ruth asked for a copy of the song. It was as follows:—

Is there a place for me, O Gracious Lord,
A place beside Thee at Thy heavenly board?
Wilt Thou receive e'en such an one as me,
And grant me just some little seat by Thee?

Can there be room in Zion's palace hall
For me, the worst, the sinfullest of all?
Who in my body bear full many a sign
Of how I spurned Thy gentle voice divine?

Yea, come! A place awaits thee at My side!
I will not cast thee out! For thee I died!
For thee Mine arms are open! Cease thy care!
Behold My hands! Thy name stands written there!

Lord Jesus, I'm so glad that there's a place
Kept e'en for me by Thine abounding grace;
That I with Thee shall ever dwell above,
In the fair beauteous heaven of Thy love.

Andrina's child died, and four months later she left the hospital.

When Ruth had been in the hospital for three weeks she was sitting and reading a copy of "The News" of the preceding day which had come in a parcel for Madsen. All at once she noticed the name Fransel.

Everything became dark and the room seemed to swim around her. She hung on to the bed and shut her eyes. For some time she remained motionless. She could not believe that she had indeed read of the death of her mother. She had written to her twice since she had come into hospital and had got no answer. She had made up her mind that she was going to get a letter this week. A feeling came over her that she must see her mother once more, even though she were dead. Her heart cried out for her mother.

She plucked up courage and went to the head nurse and told her that she had just seen the death of her mother in the paper, and asked her whether she could not help her to see her mother before she was buried. She did not mind who accompanied her, as long as she could see her mother once more. The nurse went with her to her room and tried to comfort her. She could not promise her leave to go home. It would only increase her pain to see her mother lying dead. When she was quieter she would be able to rejoice that her mother's pain was over. She could rest content that all possible would be done for the body and the funeral. The nurse gave her writing paper and a stamp so that she could write and learn when the funeral would be, and could send a pretty wreath.

The following day a letter came from Mrs. Hansen. Her mother had never spoken of her during the last weeks, and Mrs. Hansen had never enquired after her, as she had so much suffering and difficulty in her own home. Her mother's death had been quite unexpected. Early one morning, just as Mrs. Hansen came into her room she had a hard attack of coughing, followed by a severe haemorrhage. Mrs. Hansen had run for a doctor. He said that a blood vessel had burst in the left lung. After this she lay in an unconscious state until she passed away. There had been no conversation between them. She had been moved to the chapel in East Church Cemetery and was going to be buried two days later.

Following on this visit Ruth was confined to her bed for days together. Her feet became swollen and pained night and day. Generally too she suffered from pains in her head. When the girls learnt that Ruth had lost her mother they clubbed together and bought a wreath. The nurses also joined in sending another as from Ruth, with a ribbon on which was printed "Rest in peace, dear mother. Thank you for all your goodness."

The week after the funeral of Ruth's mother Mrs. Hansen came to see her. She told her the details about her mother's death and burial and said that Fransel was still living in the apartment. He had asked after

Ruth, but Mrs. Hansen had not told him where she was. She never liked the man—he looked at one so disgustingly. "It was strange that mother should never have told you that I was here", said Ruth, "I wrote to her twice since I came in." She looked at Mrs. Hansen as though she would read her thoughts. She had again and again wondered how it could be that her mother should never have mentioned her whereabouts. Was it possible that she had suspected the truth and therefore had said nothing. Ruth could not understand how she could have done this. It was true that she had told her to address letters to her to "The Fourth Wing", but she did not know that her mother had ever visited Ullevaal or knew anything of the different wings of the hospital. Besides this, there were many patients in the Fourth Wing who were not suffering from this particular disease. She had kept on debating this point among the other memories which tortured her. "Did she never tell you that I was ill?" Mrs. Hansen was picking up a stitch which she had dropped. "No, she never mentioned that." "Did she suffer much before her death?" "I think she always suffered a great deal, but she said so little and was so patient—she was a splendid woman. I miss her although I had a hard time looking after her. It was often such a comfort to me to be able to tell her of my troubles. She understood so well. I have never seen a smile like hers—tears seemed always mingled with it. I probably won't be coming to visit you again, but you can come and see me when you get out, which I hope will be soon. Shall I tell Fransel that you are ill?" "No! please don't. I suppose he is out all the time since mother died." "Yes, he was out most of the time while she was still alive. I am so angry with him, I can hardly speak to him as I would to others, as he scarcely understands what one says, otherwise I should certainly have given him my mind."

CHAPTER VII.

Ruth often thought of her mother—especially at night when she could not sleep. Was it possible that she suspected how things really were, and that the suspicion had hastened her death? Many things which she had never thought of before rose before her mind. She seemed to see each line on her mother's face, when she answered her shortly and curtly. At last she understood the feelings which were hidden beneath her expression of quiet sorrow. Ruth experienced bitter remorse and pain whenever she thought of all this. She tried to thrust the memory from her, but she could not. Why had she not paid attention to all this before? Thoughts of Olaf also began to trouble her. Many things which he had written now first became luminous. She realized how his letters

bore each its own character, even the addresses on the envelopes had each its own message. At first, when he had but recently arrived in America and she was frequently writing to him the handwriting was clear and strong, but afterwards it became extremely careless and ragged. Could this have been because he became uncertain of her love—possibly even of her faithfulness—to him? He spoke more and more of his feeling that she was forgetting him—if indeed she had ever loved him—and said that there was nothing harder to bear than the fickleness of those whom one loved. Was it possible that he had been broken-hearted and unable to sleep because of her. Then the memory of Petersen tortured her and filled her consciousness. She saw ever more and more clearly how badly she had treated Olaf and yet it was a greater grief to her still to think of her mother. He was still alive; she could still ask for his forgiveness, but the worst of all was that she could never ask her mother to forgive her—never talk to her again. She became convinced that it was her duty to make all amends in her power to Olaf. She would have to tell him just how things really were, so that he could forget her and love some other girl and be happy. But every time she tried to write her feeling of shame was too much for her.

One day she was alone in her room. "Now I must get it done," she thought. The beginning was the hardest part.

Dear Olaf,

It is a long time since I last wrote to you, and much has happened for which I must ask your forgiveness. I have never told you how badly I have treated you, but have realized things when it was too late. I am now a patient in the Fourth Wing of the Ullevaal Hospital. I have been here more than six months and shall probably never have complete health again. I did not understand what I was doing, but I did something which I ought not to have done, and now a terrible punishment has come on me, because I shall probably never be well again, and nevermore be able to work. People shrink from all who have this disease and they have to go through the world with veiled heads. I am telling you all this so that you can quite forget me and can marry a good wife and be happy. Don't be angry with me for the bad way in which I have treated you. I feel so much happier now that I have told you just how everything is, and I believe that you will forgive me. If only I could also ask forgiveness of my mother, but I was here in hospital when she died and now I can never talk to her again. The worst of all is that I am afraid that what I did may have contributed to hasten her end; I see now so clearly what she suffered because I would not do what she told me. She thought so much of you and used to beg me to make you a good wife—but now I can never be any man's wife. There is nothing else in the world as dreadful as this disease—one becomes an outcast and a terror to other people.

All best wishes. I hope from my heart that you can forget all this and be happy.

RUTH OLSEN.

When she had written the letter she was happier than she had been since her mother died, but the happiness only lasted a little time. Her feelings of guilt and remorse began again. Why could she not cast all this off from her, like the other girls. But probably their cheerfulness was not all that it seemed. It could not be, unless they had natures which enabled them to forget their misery.

Her foot healed over and she was able to get up again. It was not long, however, before terrible pains commenced on the right side of the abdomen. Often this was followed by a violent fever, and for days together she lay with hot poultices. So the time wore on. The nights were the worst when she could not sleep for the pain. Then her thoughts whirled backwards and forwards, memories tore and bruised her soul—memories of the wrong that she had done to others and that others had done to her. Her mind was borne forward without rest. Though drowsiness and sleep came to her at times, she dreamt about the same trouble. Several months passed after Ruth had written to Olaf. Then, one day a letter from him arrived. A ten dollar bill was enclosed. He wrote,—

Dear Ruth,—

I ought to have written you a long time ago, but I felt that I could not write at once after the receipt of your letter. I was so stunned and felt so badly about it all, and, I have to confess, was so angry with you. But now I have had time to think round things and to get a saner view of life. I got a poisoned hand and for months together could not go to work. But I believe it all turned out for my good, as when the pains were worst I could not think so much of my sorrow, and it helped me too to understand something of your suffering. You must indeed be far worse than I. My anger now is centred on the scoundrel who ruined you. I feel that I can never forgive him. He ought to be locked up, and then he could not act so with other human beings. Some-day they will understand what they have done—villains who destroy the outlook and happiness of others. It has also occurred to me that I did wrong in going away and leaving you alone for years together. I was sometimes afraid for you, when I noticed how you listened to the fair words of young men; and although I was not long in Christiania, it did not escape me that many temptations were waiting there for the young and unwary. But I believed that you loved me, and that you had your mother to go to for advice. Now I see that you have never loved me, at all events not as I have loved you, because I never could have given myself to another girl—and indeed never can. My future happiness, as I looked forward to it, is gone and can never come back to me. All I wish for now is that I may be your friend and brother, because I love you in spite of all and cannot bear to think of your unhappiness.

Can't you think of coming to America when you are better and can leave the hospital? I will send you a ticket. I could meet you in New York and we could be married there. Then I could either get work there or come back here. Here are small country houses, and I imagine you would be happier so than in

this appalling huge city. I have gone back to work again, and if I can keep my health you shall lack for nothing. I have always wondered whether I ought to return home to Norway and live there. Perhaps you might prefer that, but over there it would be harder for us to keep our trouble secret. My people might visit me if I lived near them; and anyhow Norway is not as dear to me as it was, after all that has happened. At all events I could never live in Christiania, because I feel that in some way the city has been to blame. Before this I have longed for Norway, and wanted to come home as soon as I had got enough money for my passage. But now that joy, like everything else, is gone.

I should be so glad if you will buy yourself something which you need or fancy with the bill which I enclose. I am anxious too that, when you get an opportunity, you would buy a wreath for me and place it on your mother's grave. Things have been rather hard here and many are out of work, but fortunately I got work in the factory in which I was before.

Please write soon. We must bury the past, as far as we can, and try to meet the demands which life makes on us from day to day. You must see that we succeed in that. Though the way be steep at times, we can share the burden. And now we probably understand to some extent what the other is going through and can help one another as brother and sister.

All best wishes for your happiness,

Your friend, OLAF.

Ruth read and re-read this letter. She could not understand why she had not loved him, and in fact did not yet do so. How was it possible that one should not love such a splendid man, and should be mad with love towards a wretch, who was not worthy of so much as a glance? Yes! but was it so easy to see that Petersen was a villain? She considered. She could not quite say that it was—but if she had been wide awake she might have seen that his excessive attentions to her bore no witness to a pure love. A real lover tried to shield the one he loved from all that might harm her. She compared his look and manner towards her with the manner of Olaf when they were together. She bit her lips. How could one be such a fool, yes, more than a fool—so wicked? And how came it that one did not pull oneself together and despise a man who had so little respect either for his own body or that of another? A great deal of this she had never even thought of. Indeed she had never considered the matter seriously, and yet a warning voice had spoken within her, a certain sense of modesty. Why had she not listened to that voice? Yes, why? If only one could die the day, the hour after! But that was impossible, though one cried till one was unconscious. If only she had known the results, had known that the city was full of the wicked disease, that one could get ill through once going with a man, ill for one's whole life, so ill that one was a terror to other folk and could never marry, never have children! If only she had known that the men who treat women so care for them no more than for the stub of the cigar which

they fling away in the street while they light another! But if she had not got the disease herself would she ever have heard of this? She thought—thought of the time that elapsed before she knew that she was ill. It was true that she had felt disquiet at the thought of having done wrong; she felt as though she were no longer mistress of herself; but what tortured her most was her longing for Petersen, and the fruitless waiting for him day after day. It was he of whom she was always thinking. Had he been good and true to her she would have been glad to have had him, although she now knew that those were far the happiest who kept themselves pure and untouched from one another. One generally learnt too late the things that belonged unto one's peace. She now understood many things that her mother had said to her, and which she had never realized before.

(*To be continued next month*)

The Sanitary Inspectors' Association of Canada

BACTERIA IN MILK

By Mr. F. Hudson

Honours Graduate, Kingston Dairy School; Dairy Inspector, City of Winnipeg

(*Continued from Sept. number*)

This ropy milk must not be confused with that resulting from pus from a diseased udder. Milk as it comes from such udders frequently is found to contain white masses or strings of coagulated material. On the other hand milk which becomes ropy comes from healthy udders and is normal when drawn, but the ropiness subsequently develops, and this ropiness is due to growth of certain bacteria of which there are a fairly large number possessing this power, the most common being the Bacillus lactis viscogus. They bring about this condition in one of two ways, viz., the bacteria in growing develop a thick glue-like envelope or covering, and by the adhesion of these sticky envelopes, stringy masses are formed (an example of similar character is seen in vinegar, forming the so-called "mother of vinegar") or the ropiness is produced by the bacteria growing and so acting on the casein as to transform it into a slimy, mucus-like substance, resembling thick sputum or spittle. Under these conditions the milk may be drawn out by means of a pencil or similar object into threads, which in extreme cases may be fine and silky and more than a foot long, though it more frequently happens that they break when only an inch or less in length. There have been instances where the milk has been reduced to a condition similar to a sticky stiff dough.

It would appear that the source of these bacteria is (1) from water, especially certain well and pond waters, (2) dusts from foods and (3) manure. From water, these bacteria get into milk directly from the rinsing of cans, pails, etc., or in the case of ponds, by cattle wading in them, soiling their udders and dust etc., dropping into the pails during milking.

As a rule, these slime producing bacteria show their slime formation best between 65° and 78°F. At higher temperatures there is very little slime formation, but milk is curdled, the curd being very soft and is partially broken up. Our ordinary Canadian Cheddar cheese cannot be made from slimy milk, although as I before mentioned, the Hollanders take advantage of this condition.

The trouble can be prevented by being careful to have a good water supply, cleanliness in the production of milk, complete sterilization of all utensils and proper cooling of the milk.

(4) *Soapy milk.* This is usually a modification of slimy milk, where the milk in addition to being slimy has a soapy taste. The causative agent of this trouble gains entry to the milk from similar sources to other slimes in milk, but is more likely to come from food dusts, especially that of straw, but it has sometimes also been found in water from dairy wells.

Bitter milk. There are several agents responsible for this condition in milk. Sometimes when a bitterness has been apparent in milk, it may not have been caused by bacteria at all, but has been brought about by the cattle having eaten certain weeds. But the trouble is more often due to the action of bacteria. As we have already seen, some varieties of gas-producing bacteria and those responsible for the sweet curdling of milk give a bitter taste to milk. Then again may be mentioned that described by Conn as the micrococcus of bitter milk and the micrococcus casei amari described by Freudenreich. The micrococcus of Conn will cause bitterness, especially if the milk is held at a low temperature, say below 55°F. for two or three days and then its temperature raised, and it will also produce some sliminess. It may be mentioned that when cheese is made from this class of milk the bitterness is, if anything, more pronounced in the cheese than it was in the milk itself. Apart from the causes mentioned, this condition of bitterness may also be due to certain yeasts which will be dealt with a little later on.

Coloured milk. This is a very peculiar condition which is rarely seen except when milk is kept at a temperature under 70°F. for two or three days. Milk may sometimes be found to have a decided red colour and this may be brought about by the bacillus prodigiosus, which is an air carried organism found growing at times on exposed foods, or by the bacillus ruber, a red bacterium found in water or growing on the side of the drains of cheese factories. Either of these may cause a red growth on the surface of milk and produce a degree (more or less) of red colouration of the body of the liquid. Then again we may find a yellow milk, this being due to the action of the bacillus synxanthus, whilst blue milk is caused by the bacillus cyanogenus. There are certain green water bacilli, the bacillus fluorescens viridis, which in addition to causing a green discolouration of the milk give a fetid odour and also digest the casein. Whilst this condition of coloured milk cannot be said to make milk in any way attractive, yet the appearance of it is its worst feature as practically none of these colour producing bacilli are of any import as causes of taints or defects in cheese, etc.

Yeasts. The next to claim our attention are the torula or yeasts which are plants somewhat higher in the scale of development than the bacteria and are from 40 to 60 times as large. There are different species of yeasts and they are widely distributed, being found to grow and develop abundantly on certain leaves,, fruits and grasses. These are the so-called wild yeasts and are responsible for the process of fermentation which commences with sugar, syrup, syrupy solutions, fruit juices, etc., when these are exposed to the air. These yeasts may, and undoubtedly do, gain entry to milk by means of falling leaves, etc. Milk, however, is not a particularly good medium for the growth of yeasts, but yet there are some species which may develop in, and lead to certain defects of, milk. One of these organisms, torula amara, produces a bitterness in milk. It was first described by Professor Harrison as occurring in a cheese factory in Western Ontario. He found a similar yeast on leaves of certain trees, and believed this to be the cause of the trouble. It is now believed that fruity and sweet flavours in milk are due to the presence of yeasts and certain it is that these conditions are decidedly most common in summer, the time of the year when yeasts are abundant in the air. Gaining access to the milk they produce certain elements of an aromatic nature which give the particular fruity flavour. This trouble may generally be stopped at once by protection and proper cooling of the milk. Whey tanks may be a source of seeding. Many whey tanks stand near, or in the shade of trees with branches hanging over them, and as we have seen, these yeasts grow on the leaves of trees and it is quite a simple process, by leaves carrying the organisms falling into the tank, to convert it into a seeding centre. When it is understood that this whey is taken back to the farm in the same cans in which the milk is drawn to the factory, the course of infection may easily be followed. In this connection the only remedy is a complete sterilization of the cans, thorough pasteurization of the whey and absolute cleanliness of the tanks. To touch again on red milk, this may also be caused by a red yeast (torula rosea) which is found in the air, on exposed foods, and on the sides of whey drains in cheese factories.

I do not think I need say anything about the oidia or moulds as the majority of them are surface growers or at least form their spores only when exposed to the air and only come under notice when they appear on the surface of cheese or butter.

Now, Mr. Chairman and gentlemen, in reviewing the foregoing, we have seen that bacteria gain entry to milk through dirt and that, as it will naturally follow, this dirt can only be introduced into the milk by dirty methods. It cannot be too strongly emphasized that many of the bacteria

which thus gain entry are of an undesirable and even dangerous type, neither can it be too strongly emphasized that the full responsibility for these conditions rests entirely upon the shoulders of the milk producer himself. I will deal with this a little further on.

This dirt, carrying its load of bacteria, having got into the milk during the process of milking, is more or less efficiently taken out again by pouring it through a strainer, some dairymen even usng absorbent cotton pads for this purpose, but in cases where milk is improperly protected after milking and straining, the dirt which may then get into it stays there. It can be said that these cotton pads do their work very satisfactorily as there will be practically no sediment left in the milk, it being left behind on the straining pad. But even so, can this milk be said to be absolutely clean? If judged from the standard of the sediment test, it would be clean milk, but the great fact must not be overlooked that this dirt has already deposited its cargo of bacteria in that milk and they are still left there even after the most elaborate straining. Of course, prompt cooling of the milk will check the growth of the bacteria, but that does not explode the fact that if absolutely proper methods of milk production were adopted, there would be very few bacteria there to check, and this leads me to say that it is risky to advise dairymen to use such things as cotton pads, because in many instances it would only be calculated to lead to greater carelessness in matters of cleanliness of production, the argument running something like this, "Why should I bother about clipping and grooming the cows, or washing their udders or washing my hands? If any more dirt gets into the milk, the strainer will take it out".

However, the dirt being taken out and the bacteria left behind, what means have we of finding out that they are there? By bacterial count and examination which I will not speak about except to say that under the system as at present employed in many places, the results of the count will be rendered as so many, say 50,000 per cubic centimeter. But 50,000 what? Are they lactic acid bacteria? If so, there is no great harm done apart from possible souring and we know in what quarters to look for the trouble. Are they undesirable types? Then harm may be done, especially to infants and young children, and in case of trouble of this nature, we also know where to look for a remedy. Therefore, the logical conclusion is that a bacterial examination should be not only a numerical one, but a classified one.

However, we will say the milk leaves the farm for its destination. If for consumption in its raw state nothing further, of course, is done with it except to distribute it. The consumer gets it, dirt and bacteria together. We are told, are we not, that we eat a peck of dirt in our lifetime, but

unfortunately, some of our milk producers seem to look upon it as their special duty to provide that quantity themselves. What trouble is caused by these means it is almost impossible to say.

But supposing its destination is one of the milk plants. What happens to it there? First of all it is clarified. Clarified? What is that? Clarification is centrifugal force applied to the milk for the purpose of taking out the dirt. It does it very effectually, but still we cannot forget that it is taking from the milk something that should not be there.

Then the milk is pasteurized, which means that it is heated to a temperature of 145°F. and held at that for 30 minutes for the purpose of killing any bacteria present in the milk. It is claimed that if the process is properly carried out, it will destroy 99½% of the bacteria, but it does not guarantee the other one-half of one per cent, which with a raw milk containing 200,000 bacteria per c.c. before pasteurization would mean 1,000 per c.c. after pasteurization to carry on their work at the first favourable opportunity, and this number would, of course, be increased or decreased in proportion as the bacterial content of the raw article was more or less. But again we cannot forget that this process of pasteurization is adopted for the purpose of killing bacteria, the greater number of which should not be there, and would not be there if greater care were taken in the production of the milk.

Then we have the different laws and regulations passed by towns and cities, provincial and federal governments. What are they? Simply a lot of "Thou shalts" and "Thou shalt nots" dealing with matters which the dairyman's own sense of decency and cleanliness should teach him. Why should it be necessary to have to embody in any law that a man shall properly cleanse and sterlize his utensils, groom his cows, wash the udders, and even to direct that he shall wash his hands before sitting down to milk a cow? There is something wrong when it is necessary for such laws to be passed, but that they are necessary is an indisputable fact, because there are dairymen all over the country, aye, and all over the world, who will tell you that they run a first-class business and even canvass for business on that basis and yet these same men will use forks and shovels whose handles are smeared with manure and then start to milk cows without washing their hands. It is also a common occurrence for many of these individuals and their helpers to dip their dirty fingers into the milk in the pail and even to squirt some milk on to the fingers from the teats. Comment on such things is needless.

In this connection, I also take the liberty of saying that in paying so much attention to the fat content of milk the different governing bodies are grasping at the shadow and losing the substance. The fixing of a

standard for fat is perfectly all right as a preventative of fraud and unfair dealing but I would like to ask, is there any man would dare to say that the consumption of milk containing one quarter or one half per cent less than the legal standard for fat content will prove fatal to the consumer. I don't think there is one but there are many who would tell us that bacteria in milk resulting from manurial and other unclean contamination have proved dangerous to human beings of all ages. Therefore I say that there is no law strong enough and no punishment severe enough for a man who is so criminally indifferent to the health and welfare of the people as to deliberately refrain from doing those things he should do and does those things he should not do.

And now I have referred to what has been done and what is being done to remedy these faults. But the question is, what can be done in future? We have seen that the dirty condition of milk and the bacterial contamination is the direct, or indirect result, as the case may be, of carelessness, indifference or even perhaps deliberate laziness on the part of the milk producer. We have seen that clarification and pasteurization simply aim at the effect but not at the cause, and to some extent they seem to go hand in hand with unclean methods for it is within the knowledge of our own Dairy Division that there have been cases where men have ceased selling raw milk on the streets and taken their milk to the pasteurizing plants and this has been followed by a slackening off, what may be almost termed a degeneration, in their methods. It is deplorable that men should think that, because they take their milk to be pasteurized, they can sacrifice all sense of cleanliness and sanitation.

This is not a question to be handled with kid gloves and these milk producers must be taught that their milk must be clean whether it is to be pasteurized or consumed in its raw state. They must recognize that clean milk is a blessing and that dirty milk is criminal, to be dealt with accordingly. They need more knowledge of the article they are handling, for it is a sorry fact that very many of them do not know even the simplest things about milk. And the public have to suffer accordingly. There must be a better class of men in the business and there must especially be a better class of men selling raw milk on the streets.

And now, in conclusion, Mr. Chairman and gentlemen, I will say that perhaps I am looking forward to too high a standard in this milk business, too much of an Utopian condition, but I do not think it is impossible. As I have said, clarification and pasteurization, whilst possibly having their drawbacks, aim very effectually at the effect of these things and such being the case, as desperate diseases require desperate remedies, my idea is this: Let any man who wants to sell raw milk to the public satisfy

the respective authorities, by examination, that he possesses some knowledge of milk and its production and that he can produce, and maintain the production of, a first-class, clean and practically bacteria-free milk. If he should fail to qualify in this, then the only destination for his product is the pasteurizing plant. In this way, we should, I believe, get the proper class of men into the raw milk business and if there should happen to be any backsliding on their part, the punishment could be made to fit the crime.

This may seem to be a drastic proposal, but life and health are valuable possessions, possessions far beyond comparison with any such considerations as a man's business and no obstacle should be allowed to stand in the way of their preservation.

The Provincial Board of Health of Ontario

Communicable Diseases reported for the Province for the Weeks ending Sept. 6th, 13th, 20th, 27th, 1924

COMPARATIVE TABLE

Diseases	Cases-Deaths Sept., 1924		Cases-Deaths Sept., 1923	
Cerebro-Spinal Meningitis	7	7	2	1
Chancroid	....	....	6	....
Chicken Pox	106	....	*....	....
Diphtheria	183	6	245	17
Dysentery	....	8	*....	....
Encephalitis Lethargica	5	3	*....	....
Gonorrhoea	175	....	222	....
Influenza	6	1	13	7
German Measles	6	....	*....	....
Measles	233	....	95	....
Mumps	100	....	*....	....
Paratyphoid	3	....	*....	....
Pneumonia	....	82	....	93
Anterior Poliomyelitis	35	2	6	2
Scarlet Fever	195	1	270	6
Septic Sore Throat	6	....	*....	....
Small Pox	13	....	29	....
Syphilis	85	....	173	....
Tetanus	....	2	*....	....
Tuberculosis	119	**61	169	74
Typhoid	114	13	131	25
Whooping Cough	225	5	230	8

*Not reported in 1923.

**Only 40 per cent. reported.

News Notes

In co-operation with the Provincial Board of Health of Ontario, the Canadian Social Hygiene Council has arranged for the showing of the Social Hygiene Exhibit in Fort William and Port Arthur for a period of two weeks commencing October 13th. As usual moving pictures will be shown daily and addresses given by well-known speakers on various phases of Social Hygiene. Following the showings in Port Arthur and Fort William the exhibit will be moved to various centres in Ontario where Social Hygiene Councils have been organized. Successful exhibits have already been held since the first of September in Ottawa and in Kemptville.

Honourable Dr. H. S. Beland, Minister of Health for the Dominion, and Dr. J. A. Amyot, Deputy Minister of Health, have left for Europe to attend the Second International Opium Conference at Geneva.

Mrs. Clive Neville Rolfe, O.B.E., General Secretary of the National Council for Combating Venereal Diseases of Great Britain, will speak in Canada at various points during the month commencing November 22nd. Mrs. Rolfe is a distinguished authority in various fields in Great Britain and latterly has been known for her exceptional work in the Social Hygiene field. It is hoped that it will be possible to arrange various public addresses and conferences for Mrs. Rolfe during her stay in Canada. Her trip will be under the auspices of the Canadian Social Hygiene Council.

The American Public Health Association meets in Detroit, October 20th to 23rd.

A prominent Ontario Public Health man who had temporarily occupied a cottage at one of the lake resorts during part of the Summer, was startled by the following unique notice from the local sanitary inspector, who evidently is "on the job: "Kindly Have your closett fixed at once, i am giving you 24 ours to fix up. Signed, Blank, Inspector." Needless to say the order was promptly obeyed.

The National Social Hygiene Conference meets in Cincinnati, Ohio, November 19-22. Many speakers from the United States, Great Britain and Canada are expected. It is hoped that many Canadians will avail themselves of the opportunity of attending this Conference.

Dr. A. S. Lamb, formerly connected with the Tranquille Sanatorium, was recently appointed Travelling Diagnostician in Tuberculosis work in the Province of British Columbia.

The report of his activities during the first year of his work is very interesting. The plan adopted was to meet local organizations to explain fully the purpose of his work and the public interest has been most satisfactory. The work has been conducted through and with the assistance of the local medical practitioners.

A great many cases have been referred to Dr. Lamb by the medical men and he has been able to be of great service. He is furnished with a portable X-Ray machine, which is in charge of a technician from Tranquille Sanatorium.

A year ago the Provincial Board of Health was in receipt of a grant from the Canadian Tuberculosis Association of One Thousand Dollars ($1,000) to be devoted to the examination of school children in a district to be selected. This work was carried out in South Vancouver and a preliminary report was issued, giving an account of the conditions as found.

A further report is in course of preparation and will be forwarded to you shortly, showing the result of the supervision maintained over the children examined. The results promise to be very satisfactory.

The Provincial Bureau of Health of Quebec is, at the present moment, conducting a campaign to force all municipal councils and all the schools, whether managed by the School Boards or independent, to fully apply the Provincial law or the by-laws made under the Quebec Public Health Act with regard to compulsory vaccination.

The School Boards and independent schools directly come under the Provincial by-laws which require (sect. 21a) that: "No school or other corporation, and no person having control of a school, college, convent, university or other educational establishment shall give admittance in the institution to any pupil, unless provided with a certificate from a practising physician of the Province of anti-variolic vaccination or of insusceptibility of taking vaccine, the operation having been performed within less than seven years."

In pursuance of this, the Provincial Bureau of Health has issued the following order to all School Trustees and heads of independent school institutions in the Province.

"The Provincial Bureau of Health has been surprised to find out, during the last academic session, that many School Commissions or other school authorities had disobeyed the Provincial by-law No. 21a, which

requires them to refuse admission into schools or institutions under their control of any unvaccinated pupil.

"Consequently, the Provincial Bureau hereby, formally notifies all whom it may concern that, from now, it will have the said by-law most strictly applied and should, from the 1st September next, the District Inspectors report infractions of the by-law, the school corporations or other school authorities which will be found responsible for the same shall be brought before the Courts of Justice."

Compulsory vaccination of pupils in all educational establishments, although far-reaching in its effects, does not, however, bring all the population in the Province under the scope of the law. This is therefore supplemented by the Public Health Act which makes it incumbent upon all municipal councils to pass by-laws making vaccination compulsory for all persons.

In order to have uniform by-laws in every municipality, a form of by-law has been mailed to every municipal council with the request to pass and apply it. It is, of course, understood that a municipality may, within its own powers, make such by-law more complete and stringent, but this form is the required minimum and may not be made less severe.

Out of the 1,300 municipalities in the Province, some 800 have already complied with the order to enact such a by-law. Some 200 are now being brought before the law courts to say why they have not complied with the order, and correspondence is going on with the others with a view to persuading them to obey, until such time as it may become necessary to institute proceedings against them.

The suggested by-law follows:

1° From the time the present by-law will come into force, vaccination and revaccination will be compulsory within the limits of this municipality for all persons found in it.

2° Therefore, 48 hours after the said by-law shall have come into force any person, being within the municipality, who will not be able to establish that he has been vaccinated successfully within the last seven years, or who will not be able to establish, by a physician's certificate, that he has been vaccinated but without success within the last six months, will be liable to a fine of five dollars, and also to an additional fine of one dollar for each day he will have omitted or will omit to get vaccinated from the second day after the said by-law has come into force.

3° Forty-eight hours after the said by-law will have come into force, any person being within the municipality will have to exhibit to the executive officer of the municipal sanitary authority or to .....
....., whenever the said person shall be so required

verbally or otherwise, a certificate from a physician duly qualified to practise as such in the Province, establishing that said person has been vaccinated successfully or that vaccination has been performed upon him, but without success, within the delays fixed in the preceding paragraph, and each refusal or omission of such person to exhibit said certificate, when required to do so, will render him liable to a fine of five dollars.

4° A certificate from a physician duly qualified to practise as such within the Province, stating that the state of health of a person does not allow of his being vaccinated, and establishing the reason for such impossibility, if exhibited to the executive officer of the municipal sanitary authority or to ..... by such person when asked to produce a vaccination certificate, will exempt such person from the application of the two preceding articles, but provided two months have not elapsed since the date of the certificate.

5° Any physician who will knowingly give a false certificate upon any facts he may be called upon to certify in virtue of the preceding articles, shall become liable to a penalty of twenty dollars.

6° Any person who will not have the means to pay to be vaccinated shall on applying to ..... and on satisfying him of his inability to pay, be vaccinated at the expense of the municipality.

7° Are exempted from vaccination, as ordered by the present by-law, persons who may establish to the satisfaction of the executive officer of the municipal sanitary authority that they have had small-pox.

Book Review

"Habitual Constipation: Its Causes, Consequences, Prevention and Rational Treatment." By Ismar Boas, M.D. Translated by Thomas L. Stedman, M.D. 12mo cloth. Illustrated. 299 pages. $2.00 net. Funk & Wagnalls Company, Publishers, New York.

This book is evidently intended for the perusal of the sufferer from constipation, and for that purpose could scarcely be improved upon. It is simple, thorough, and very practical, and while not taking the place of expert medical advice should prove a valuable adjunct to the carrying out of that advice.

The author stresses the harmfulness of purgatives and dilates upon the importance of mental, physical and dietary measures in treatment.

The German origin of the book introduces one or two interesting features. Dr. Boas speaks of the decrease of intestinal disorders on the simplified diet of wartime Germany and their rapid return with peace and comparative plenty. Also he remarks on the task of getting German children to leave their studies for play in the open air, a difficulty, I should think, less prevalent on this continent.

The book is well translated by Dr. Stedman, and can be heartily recommended, not only to the intelligent victim of intestinal stasis, but to the physician himself.

Editorial

PUBLIC HEALTH AND PUBLICITY

If there is one principle the value of which has been fully realized by the modern business man it is that which is expressed by the axiom "It Pays to Advertise". Nothing can be sold over a large area unless the means for informing the buying public of the existence and values of the article to be sold exist. And the business that gets ahead is the business in which good advertising is done. Naturally it does not necessarily pay to advertise a poor article, but good material, fair prices and otherwise good business methods will not spell success in the absence of good publicity. With it success is practically certain.

One often wonders to what extent health officers realize the fact that even if they have the most valuable thing in the world to introduce to the public—the possibility of health for everyone—the public will not realize this important fact unless they are told about it. Health officers, one knows, seem to feel that they must hide their light under a bushel—that publicity methods are indiscreet and such a violation of the conventions which rule in ordinary medical practice that they are out of question.

This latter idea is probably at the root of the lack of publicity which one finds to be characteristic of some health programmes. Medical men have been trained to avoid publicity. Many of them when they become health officers hold to old habits which have become ingrained. When the result is poor publicity it is always disastrous.

To legislators, teachers, preachers, the general public and even to his fellow physicians the health officer should always be a prophet of the new day when preventable disease will be prevented—when death will be delayed until it is only the natural result of the breaking down of worn out human machines that have done their work long and faithfully—when the misery that comes to people because of ignorance of the laws of health will be no more. There is enough knowledge in human hands now to bring that day immeasurably closer. It will come more rapidly if the health officer does his duty. That duty can not be done in the seclusion of the library or even of the laboratory, important as these portions of his machinery are.

It can only be fulfilled when he realizes that good advertising and publicity sense are an absolute fundamental if his high ambitions are to be realized.

Through an error in proof reading the heading to the editorial printed last month, concerning the death of Dr. R. H. Mullin, read "The Late Rev. R. H. Mullin." The PUBLIC HEALTH JOURNAL regrets this unfortunate mistake. The proper title was obviously "The Late Dr. R. H. Mullin."

The newspapers who perchance may attack him will not be placated without it. Neither will the legislators who pass appropriations come to his aid, nor will the great public to whom he ministers believe or follow him. When he learns that he must not be only the master of the mechanics of his position, but a preacher and a teacher as well, then will all things be given unto him.